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ABSTRACT

This exploratory, descriptive study assessed what, if anything, is beneficial about engaging in agricultural work, or, farm work, for individuals living with posttraumatic stress disorder (PTSD). An anonymous, online survey was utilized, asking a series of multiple choice and open-ended questions about the participants' farm work history, PTSD experience, and demographic information. Thirty-nine participants responded with varying identities and work history, but many shared experiences of PTSD. Almost all of the participants found farming to be beneficial for managing PTSD. Specifically, four themes arose from the data that explained what about farming was beneficial for individuals with PTSD: farming necessitates present-orientedness; having responsibility toward others, whether animals, individuals, or community; having the autonomy to create a safe environment, sometimes including solitude; and feeling connected with nature. Though there is much literature to support the benefits of horticulture generally for mental wellness, there is a dearth of literature that speaks to the relationship between farming and PTSD specifically. With an increased understanding of this complicated diagnosis, individuals, families, and communities will benefit from further research examining the benefits of farming for individuals with PTSD.

FARM WORK AS TREATMENT FOR POSTTRAUMATIC STRESS DISORDER

A project based upon an independent investigation,
submitted in partial fulfillment of the requirements
for the degree of Master of Social Work.

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2015

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CHAPTER I

Introduction

Posttraumatic stress disorder (PTSD) is a painful and sometimes debilitating disorder that has a lifetime prevalence of 6.8% of the United States population (Kessler et al., 2005). Individuals suffer symptoms such as distressing memories and/or dreams, dissociative reactions, intense physiological and/or psychological distress at exposure to cues that remind them of the traumatic experience, avoidance of distressing stimuli, alterations in arousal and reactivity (e.g., exaggerated startle response or numbing), and negative shifts in cognitions and mood (e.g., "No one can be trusted.") (American Psychiatric Association [APA], 2013). The highest rates of PTSD are found "among survivors of rape, military combat and captivity, and ethnically or politically motivated internment and genocide" and also for veterans and certain vocations including police, firefighters and emergency medical personnel (APA, 2013). Bessel van der Kolk and others have spoken to the role of somatic reexperiencing in which "physical sensations, injury, and autonomic and neurohormonal adaptations are held in an enduring way in the body" (Rothschild, 2000; van der Kolk, 1994; van der Kolk & Van der Hart, 1991). Though there are treatment models that utilize the body in the service of healing, I have only found one piece of empirically researched literature that speaks to the benefits of agricultural work for the treatment of posttraumatic stress disorder, which is included in my literature review. However, the U.S. Department of Agriculture (2009) reported that the number of farms in the United States is both growing and diversifying, including an increasing number of young people, women and people-of-color working on and owning smaller farm businesses. The inclusion of varying communities of people working on smaller, more local farms inevitably leads to the need for a discussion of

how mental health intersects in these environments. I became interested in this topic due to my own experience doing farm work and engaging with a diverse community of people year after year, as well as my own commitment to social work practice and an interest in trauma theory. This study will assess what, if anything, is beneficial about engaging in agricultural work, or, farm work, for individuals living with posttraumatic stress disorder (PTSD).

CHAPTER II

Literature Review

This chapter will provide a broad overview of work relevant to the topic of posttraumatic stress disorder, including a brief history of our understanding of the experience, to contemporary assumptions and treatments, toward the future of complementary and alternative treatments, of which farming is one.

A History of Posttraumatic Stress Disorder

For as long as humans have walked the earth, overwhelming experiences have occurred, and since chronicling began, observations of behavior changes following catastrophic experiences have followed suit. Birmes, Hatton, Brunet, and Shcmitt (2003) wrote that since Antiquity, war heroes have been documented as experiencing isolated cases of agitation or stupor sometimes associated with terrifying nightmares. Lucretius (1951) noted that these early documents of deviations from normally-observed behavior helped early civilizations develop theories on human nature. The famous 17th-century philosopher, mathematician, and scientist René Descartes observed that events causing fear can affect human behavior long after their occurrence (Tomb, 1994). These observations may seem obvious to us now, but long ago they were insightful, fresh understandings of how humans develop and behave, how illness and wellness are defined and measured, and of course, how those who are suffering can be eased of their pain. Thousands of years of catastrophes, largely documented in the contexts of natural disasters and wars by historians, philosophers, and medical practitioners, have been required for our modern civilization to continue this journey to where we are today. There are many

treatment options that are utilized successfully for individuals who have experienced any imaginable kind of overwhelming experience to help them cope or heal. Though many cultures ascribe to psychopharmacology and psychotherapy as the first-line of treatment, the treatment of trauma has been and continues to be just as varied around the world as the experiences they purport to heal. My research study focusing on the benefits of agricultural work for the treatment of posttraumatic stress symptoms is one submission in a long history of such works.

What is now known as posttraumatic stress disorder has had many names throughout history: traumatic neurosis, shell shock, battle fatigue, nostalgia, soldier's heart, hysteria (largely given to women), 'syndrome du vent du boulet' (cannonball wind syndrome), railroad spine, and many others (Birmes et al., 2003; Lasiuk & Hegadoren, 2006; Van der Kolk, McFarlane, & Weisæth, 2007). The etiology of associated symptoms has shifted over time as well. Early writings believed that symptoms were organic in nature, the results of a concussion. In the 19th century, while psychiatry developed in leaps and bounds due to the Industrial Revolution, so did train travel. Still, traveling by train was uncomfortable at best due to the violent rocking of the cars on the tracks, and deadly at worst due to the high incidence of crashes. The after-effects of these crashes became known as "railway spine" or "railroad brain", what we now know as posttraumatic stress disorder (Birmes et al., 2003). Lasiuk and Hegadoren (2006) wrote: "Because severe and lasting disability reportedly existed in the absence of external signs of injury or objective signs of neurological damage, distinguishing between individuals whose complaints were genuine and those who feigned injury became a major problem for judges and physicians alike" (p.15).

During the first World War, psychiatric disorders were at times believed to be born out of cowardice and weakness, to fulfill a desire by the young soldier to not return to the German warfront (Birmes, Hatton, Brunet, and Schmitt, 2003). Simultaneously, others believed shell shock, as it was known at the time, was due to a predisposition of vulnerability resulting in a "stunned" nervous system and mind. This theoretical perspective was responsible for 20,000 psychiatric hospitalizations among the British (Gersons & Carlier, 1992). During wartime, the distinction between an organic development and malingering meant the difference between hospitalization or honorable discharge and, at times, imprisonment and death by firing squad (Birmes et al., 2003).

World War II followed and psychiatry was still without a proper diagnosis, so much so that military psychiatrists at the time were forced to operate "within the limits of a nomenclature specifically not designed for 90% of the cases handled" (APA, 1952, p. vi). Though an exhaustive history of the development of the inclusion of the diagnosis of Posttraumatic Stress Disorder is beyond the scope of this review, the American armed forces and the Veterans Administration were forced to acknowledge the effects of combat stress in new psychiatric diagnostic classifications. "Within these new frameworks, traumatic reactions were seen as transitory and 'acute reactions to overwhelming stress occurring in individuals with no premorbid or concurrent psychopathology' (Brett, 1996, p. 188)—in other words, as *normal* responses to horrifying events" (Lasiuk & Hegadoren, 2006, p. 77). This did lead to the inclusion of PTSD into the Diagnostic and Statistical Manual, or DSM, the "Bible" of psychiatric diagnoses, where the symptomatology and treatment of PTSD are debated to this day.

It is worth noting that much of the early history of the development of PTSD as a diagnosis focused on the military experiences of soldiers, though of course overwhelming

experiences can occur for anyone. PTSD is often seen in individuals who have experienced sexual and physical assault, natural disasters, a serious accident, childhood sexual and physical abuse, and other experiences of threat of injury or death. Besides directly experiencing a traumatic event, witnessing or even learning about a traumatic event can be enough for some individuals to develop traumatic stress reactions. There has even been recent research to suggest that race-based trauma can occur for people of color who experience race-based discrimination (Chou, Asnaani, and Hofmann, 2012).

Contemporary Diagnosis and Treatment for Posttraumatic Stress Disorder

The most current criteria for a Posttraumatic Stress Disorder (PTSD) diagnosis are necessarily complex, but symptoms tend to present themselves in three categories: re-experiencing symptoms, avoidance symptoms, and hyperarousal symptoms (National Institute of Mental Health, 2015). A licensed clinician assesses the individual to see what kind of symptoms they are experiencing, for how long, and why they began. Though there are many nuances to this diagnosis, including differences in genetic predispositions, environmental and cultural differences, suicide risks, and the likelihood of also experiencing a co-occurring diagnosis such as a mood or anxiety disorder, these nuances far exceed the scope of this review and are easily available elsewhere. However, as this research project focuses on the ways in which PTSD is experienced in both the body and mind, and that treatment might benefit from attending to both aspects of the self, it is necessary to briefly review what symptoms might look like.

Re-experiencing symptoms can occur in the form of involuntary and intrusive distressing memories of the traumatic event, distressing dreams, or dissociative reactions such as flashbacks, where the individual feels or acts as if the traumatic event were recurring (American Psychiatric

Association, 2013). One can also experience intense psychological or physiological distress at internal or external cues that even remind the person of some aspect of the traumatic event. For example, a sexual assault survivor might experience an intense reaction to cologne on a passing stranger that reminds them of their perpetrator, or a war veteran might react strongly against the sound of fireworks, being reminded of the sounds of combat.

Avoidance symptoms can manifest in many ways as well, from intentionally avoiding particularly upsetting memories, thoughts, or feeling about the traumatic experience, to even avoiding things that might remind you of the traumatic event. Intentionally avoiding the street where you were robbed at gunpoint would be one example of this kind of avoidance. However, avoidance can also present in a number of negative changes in your thoughts and mood as well. Symptoms such as having excessively negative views of yourself, others, or the world; a feeling of estrangement from others around you; an inability to experience positive emotions such as happiness or love; and even feelings of self-blame are all ways the mind reacts to overwhelming experiences (APA, 2013). Dissociative amnesia, an inability to remember parts of the traumatic event, is also a symptom that can occur.

Finally, hyperarousal symptoms might manifest as irritability or angry outbursts without a clear precipitant; reckless or self-destructive behavior; hypervigilance or feeling "on edge"; having an exaggerated startle response or difficulty concentration; and sleep changes, such as having difficulty falling asleep or staying asleep (APA, 2013). With a myriad of potential symptoms, how PTSD presents for different people varies as widely as the people and their experiences themselves. The fortunate aspect of this complicated diagnosis is that treatment is available in many forms, and many people are able to return to a satisfying life.

Currently, psychopharmacology and psychotherapy used together are the main treatments for PTSD (National Institute of Mental Health, 2015). One form of therapy that has been found to be helpful is cognitive behavioral therapy, or CBT. CBT utilizes exposure to feared stimuli through mental imagery, writing, or visits to places where traumatic experiences occurred; cognitive restructuring, wherein thoughts about the memories are examined in detail; and stress inoculation therapy, which aims to help the individual manage any anxiety that arises when reflecting on their traumatic experience (National Institute of Mental Health, 2015). Further, the U.S. Food and Drug Administration (FDA) has approved sertraline (Zoloft) and paroxetine (Paxil) for the treatment of PTSD (Alexander, 2012). These medications may help control PTSD symptoms such as sadness, worry, anger, and feelings of numbness. They can also help by making it a little easier to go through psychotherapy.

In the groundbreaking book by Bessel van der Kolk (1994), *The Body Keeps The Score: Memory & the Evolving Psychobiology of Post Traumatic Stress*, van der Kolk speaks to the physiological and neurobiological ways in which individuals who have experienced trauma are affected. Stress-responsive hormones such as cortisol, epinephrine, norepinephrine, oxytocin and others are mobilized in order to prepare the body to deal with stress. These hormones become problematic in individuals with PTSD in that they inhibit an effective stress response and indeed can lead to desensitization, a weakening of the immune and adrenal systems, a weakened ability to store memory and can lead to dissociative reactions in the face of overwhelming stress (van der Kolk, 1994). Bessel van der Kolk is one of the most cited trauma researchers today, and has helped to deepen contemporary understandings of trauma and expand treatment modalities.

Complementary and Alternative Treatment Modalities

Though one might assume an easy relationship between horticultural therapy and agricultural work, interestingly I found that horticultural therapy mostly focused on gardening, not farming, in typically a smaller hospital, rehabilitative or residential setting and that much of the healing was "passive" (e.g., simply being in the garden) (American Horticultural Therapy Association, 2012). The research I focus on here touches on the breadth of available literature that will focus on the benefits of yoga intervention for PTSD, integrative psychotherapy for survivors of military sexual trauma (MST), the use of complementary and alternative medicine use among individuals with PTSD, the benefits of therapeutic horticulture for treating clinical depression and more.

Libby, Pilver, and Desai (2013) focused broadly on assessing the extent to which individuals with PTSD use complementary and alternative medicine (CAM). Libby et al. (2013) suggested that contemporary and alternative medicine therapies might be a viable alternative option for those individuals who drop out of treatment or for whom empirically supported treatments such as cognitive behavioral therapy (CBT) and Eye Movement Desensitization and Reprocessing (EMDR) are not effective. The authors note that while CBT and prolonged exposure are top-tier treatments for PTSD, many people drop out of treatment, lacking the resources to cope with the increased distress that can occur (Libby et al., 2013). Noting the efficacy of mind-body treatments for the regulation of psychological and physiological arousal, the authors point out that many find these therapies to be relevant and accessible alternatives and thus, use is increasing (Barnes & Bloom, 2008; Moore, Brown, Money, & Bates, 2011). The authors did a secondary analysis of a compilation of data compiled into the National Comorbidity Survey-Replication (NCS-R). One strength of this method of data collection is

access to a large, diverse survey sample. Sample characteristics were noted, including predisposing factors such as age, gender and race and enabling factors such as income and insurance coverage (Libby et al., 2013). Their survey sample consisted of 599 individuals who met DSM-IV criteria for PTSD in the past year. Using descriptive analyses, the authors assessed usage of CAMs, examples of which are herbal therapies, high-dose megavitamins, biofeedback, exercise or movement therapy, imagery techniques, relaxation or meditation techniques, spiritual healing by others, energy healing, prayer or other spiritual practices, hypnosis, acupuncture and homeopathy (Libby et al., 2013). The variables were not operationally defined, as the intention of this study was not to assess the efficacy of these CAMs, but to ascertain their usage. That these variables were not specifically defined would be a limitation of this study, as there is a great deal of variability to the CAMs themselves, and also the degree to which they are used. Another limitation of this design is the exclusion of popular CAM treatments including yoga (Libby et al., 2013). Additionally, the survey results were drawn from analyses of studies that were done, at the date of study, over ten years ago, indicating the results may not be up-to-date with current mental health statistics and treatment (Libby et al., 2013). The results showed that 39% of individuals used CAM, predominantly mind-body treatments such as relaxation or meditation and exercise (Libby et al., 2013). The implication of these results is that it is important for researchers and policy-makers to prioritize the importance of supporting evidence-based research to assess the efficacy of these treatments to maximize benefits and minimize harm (Libby et al., 2013). This article is relevant to my research question in that it helps me to understand how frequently CAMs are used, why and by whom. This research also speaks to the ways in which individuals self-administer treatment, an important reality to explore in the face of

provider-oriented research and treatment. With that in mind, it shows a need for deeper research into assessing the efficacy of CAM treatments.

A 2010 article by Cully, Jameson, Phillips, Kunik, and Fortney examined whether differences existed between rural and urban veterans in terms of initiation of psychotherapy, delay in time from diagnosis to treatment, and the number of psychotherapy sessions. The authors used a qualitative retrospective database study to review patient data and created a cohort of 214,791 veterans with depression, anxiety, and PTSD (Cully et al., 2010, p. 226). The authors found that urban veterans tended to be younger with higher income levels, more likely to be female, have higher incidences of diagnoses and ultimately, have significantly and substantially more outpatient health care visits (Cully et al., 2010, p. 228). Urban veterans were also significantly more likely than rural veterans to receive a specialty mental health visit, any form of psychotherapy at all, and individual or group psychotherapy.

The authors also focused even further, looking closely at veterans with PTSD and finding that they are "2.5 times more likely to obtain psychotherapy than patients receiving diagnoses of depression and/or anxiety" (Cully et al., 2010, p. 229). Veterans with PTSD are also the most likely to receive eight or more sessions, compared to urban veterans without PTSD who averaged 6.50 sessions, and rural veterans without PTSD who averaged 4.23 sessions. This highlights the great need for utilization of effective treatment for veterans with PTSD, in particular.

There is an enormous gap in providing services to veterans, in general, and rural veterans in particular. Though issues of availability, accessibility, affordability and cultural acceptability all play very real and important roles in thinking about mental health care for veterans, it is important to also consider the kind of psychotherapeutic services veterans receive and where

they take place. This has implications when contextualized in the previous article by Libby, Pilver, and Desai (2013) when recognizing that individuals will use various forms of treatments to manage their mental health and that perhaps effort could take a stronger person-in-environment role to support empirically based research in those areas, including mind-body therapies.

Dick, Niles, Street, DiMartino, and Mitchell (2014) attempted to explore how symptoms of posttraumatic stress disorder (PTSD) were reduced through yoga that integrated mindfulness and other emotion regulation strategies. As mentioned earlier, Libby, Pilver, and Desai (2013) excluded yoga as a treatment option due to the fact that their sample (albeit large in size) was over ten years old and yoga was not yet as popular as it is now. In this article, however, yoga was used as the primary vehicle because researchers have suggested that yoga is beneficial for stimulating meditative awareness but also that it can lead to a greater tolerance for attending to internal sensations (Salmon, Lush, Jablonski, & Sephton, 2009; Shelov, Suchday, & Friedberg, 2009). Specific mechanisms of change examined through the yoga program were a change of mindfulness skills (e.g., the ability to be in the present moment without judgment), psychological flexibility (e.g., the ability to be in the present without utilizing needless defenses) and emotion regulation (e.g., "the process by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions"; Gross, 1998). The authors named two types of emotion regulation: expressive suppression (suppression of behavior when emotionally aroused) and emotion reappraisal ("cognitively transforming a situation to alter its emotional effect"; Gross, 1998).

The authors enlisted 38 participants who met diagnostic criteria for PTSD and allocated them into two groups, a yoga group that would attend a 12-session yoga class and a control

group that would not. Both groups completed weekly questionnaires assessing PTSD, pain, and mood symptoms. The questionnaires also specifically used measures to assess the mechanisms of change as described above. The authors found that, compared with a control group, the experimental group experienced increased abilities of emotion regulation but less psychological flexibility (Dick et al., 2014, p. 9). There were many limitations to this study including generalizability, as the sample was someone homogenous (e.g., with regard to class, gender, education, etc.) and a lack of availability of measures that could accurately assess the mechanism of change. However, that the results found that psychological flexibility did not increase for the experimental group was striking and worth further consideration in perhaps a more diverse context with different measures.

Northcut and Kienow (2014) developed a theoretical exploration that focused on understanding the specific treatment considerations of military sexual trauma survivors. The authors focused on the "trauma trifecta" which were listed as the loss of professional and personal identity, the regulatory functions of self-harm behaviors, and retraumatization. The authors drew from multiple theories and assessed the strengths and limitations of various treatment models, including mind-body interventions, of particular interest to me. The importance of grounding techniques to reduce hyperarousal and decompensation are highlighted here. Using a case example, the authors also spoke to the combination of the therapeutic alliance, utilizing cognitive behavioral therapy to manage thoughts and interventions of mindfulness, guided meditations, and body scans. The authors concluded by stating, "By helping clients access, explore, and accept cognitions, emotions, bodily sensations, and philosophical meanings, therapists are honoring all of the intricate facets which comprise the human experience (Northcut & Kienow, 2014, p. 11)." This article begins to bring together two

treatment perspectives that are often viewed from a dichotomy: empirically-supported treatments such as cognitive behavioral therapy (CBT), and contemporary and alternative treatment modalities (CAMs).

A mixed method study by Cynthia Price (2006) examines this further, by exploring the benefit of body-oriented therapy (a combination of bodywork and psychotherapy) for women in recovery from childhood sexual abuse. Price reviewed the importance of this work, noting that women who have these experiences tend to have a higher incidence of a feeling of loss of control of their bodies and a need to reconnect with themselves as part of the therapeutic work. In this study, the bodywork consisted of a safety check-in (e.g., asking if it is okay to be touched), a 25-minute massage, body awareness education (e.g., learning to identify sensations), and a mind-body integration (e.g., examining memories associated with certain touches). The sample size was small, only eight women, but the study found significant decreases on scales assessing for PTSD symptomatology, number and severity of physical symptoms, and even showed a tendency toward decreased dissociation. This study reflects some of the insights gained about the body-orientedness of PTSD, as put forth by Bessel van der Kolk, and the importance of including the body in treatment, as suggested by Dick, Niles, Street, DiMartino, and Mitchell (2014) and Northcut and Kienow (2014).

Research by Gonzalez, Hartig, Patil, Martinsen, and Kirkevold (2010) moves back into the mind to articulate how gardening activities affect individuals psychologically, and also how these psychological behaviors affect depression. The researchers focused on assessing whether “being away” and “fascination” contributed to a reduction in depressive symptoms in a qualitative single-group study of 28 individuals. Being away was defined as “psychological distance from daily tasks, the pursuit of goals, and other routine mental contents to which the

person ordinarily directs attention" (Gonzalez et al., 2010, p. 2004). Fascination is defined as an "effortless, interest-driven form of attention that becomes engaged in the encounter with the environment" (Gonzalez et al., 2010, p. 2004). Using assessment measures such as the Beck Depressive Inventory (BDI) to gauge symptom levels prior to treatment, the participants participated in both active and passive gardening activities, from sowing and planting to simply sitting on benches and watching birds. The results indicated that BDI scores decreased, attention scores increased and brooding scores decreased. These results were tied to being away and fascination, appearing to show that they were active components in the therapeutic intervention. The limitations of this study were both a small sample size and a single-group design; there was no control group due to a lack of participants, in general. This article presents material that begins to explore some of the psychologically beneficial mechanisms of body-oriented work, in this case, gardening. The psychological effects of gardening does have implications that are relevant to my study, but also to other forms of body-oriented work as well. Both "being away" and "fascination" move toward a groundedness in the body, where one is oriented in the present. These ideas were present, though unnamed, in the research by Cynthia Price (2006) reviewed above, which examined the benefit of body-oriented psychotherapy for female survivors of childhood sexual abuse.

Gonzalez, Hartig, Patil, Martinsen, and Kirkevold (2011) also examined whether or not horticultural activities ameliorated depression severity and existential issues. The authors note that though there is much evidence to support various treatment and theoretical models of major depression, the existential dimension is often ignored. The authors cite that Mascaro and Rosen (2006) found existential meaning to be inversely associated with depression severity, for example. Existential meaning was defined as "the cognizance of order, coherence, and purpose

in one's existence, the pursuit and attainment of worthwhile goals, and an accompanying sense of fulfillment (Reker & Cousins, 2000)." This article is particularly relevant because it offers existential perspectives on depression and therapeutic horticulture. It is worth pointing out that though this article specifically excluded individuals with PTSD, depression is a common co-morbid diagnosis for individuals living with PTSD, as individuals with PTSD are eighty percent more likely to meet criteria for at least one other mental disorder (Kessler et al., 2005). The authors cited Viktor Frankl's (1963) well-known theory that "striving for meaning is a basic human need, a purpose and a life force", and his belief that a lack of meaning is a worldwide problem, characterized by lack of interest and initiative, boredom and apathy (Frankl, 2000). Extending this theory, the authors write that an existential perspective suggests that depression can be regarded as a crisis of meaning in life (Close, 2000). Another existential perspective offered by Antonovsky (1987) suggests that, in fact, having a sense of coherence about one's life is a key component of mental health. He defines this as meaning how "comprehensible, manageable, and meaningful one's life is, with meaningfulness treated as its core dimension." Depression, then, can be looked at as a breakdown in coherence in one's life. The existential perspective on therapeutic horticulture posits that by engaging in the natural world, people are able to experience themselves "as part of a wider and greater existence (O'Connor & Chamberlain, 2000). Gardening, for example, can include active or passive activities, but it can also be a place with personal meaning, a place of privacy, and a place to anchor and understand nature (Bhatti, 2006). Ultimately, being in nature provides a place for connection with nature, a place for reflection, creation of memories and ultimately is meaning-making (Gonzalez et al., 2011).

Utilizing four measurement tools including the BDI and others that focused on existential meaning and sense of coherence (SOC), as well as one open-ended question asking broadly how participants experienced taking part in the project, measurements were taken at multiple measurement points, including pre and post (3-month) tests. Sense of coherence (SOC) is defined by Antonovsky (1987) as “an individual’s global view on how comprehensible, manageable, and meaningful one’s life is, with meaningfulness treated as its core dimension.” The assumption in this research is that depression results from a decrease of an individual’s sense of coherence. The tests assessed the severity of depression and existential issues throughout a 12-week therapeutic horticulture program involving active and passive components. The research setting and intervention is described more thoroughly in the previous literature review by the same authors. The researchers found that the BDI declined significantly during the intervention and at the 3-month follow-up. Sense of coherence (SOC) increased across measurement points, but not to a statistically significant degree, though there was a significant correlation between changes on the BDI and SOC. The authors posited that perhaps the measurement tools were not sensitive to existential changes due to the intervention, or of course that the intervention simply does not influence existential issues. The participants' responses on the open-ended question suggested that they found the therapeutic intervention meaningful, interesting and instructive. The responses also elicited themes of excitement, of participants' experiences of taking care of nature, and included evaluations of the aesthetic experience of being in nature. Although the researchers wondered about the validity of the measurement tools, this is useful information for future researchers. I also found this helpful for the creation of my own survey questions, as I included a couple of open-ended questions that asked more broadly of the participants' experience of farming while living with a diagnosis of PTSD.

Shacham, Donovan, Connolly, Mayrose, Scheuermann, and Overton (2012) focused on a mixed methods intervention of eleven individuals living with HIV/AIDS as well as a comorbid disorder such as depression, anxiety and/or substance use. The participants were asked to work on an urban farm for two days a week for eight weeks. Pre and post assessments were utilized to measure quantitative and qualitative data regarding the benefits and barriers of the experience. A limitation to this study was the small sample size that made for the impossibility of statistically significant sample size (Shacham et al., 2012). Regardless, there was a reduction in depressive symptoms and social isolation. A common theme was "the expression of little purpose in their daily routine" which was lessened through this study. This research speaks to themes highlighted in the article by Gonzalez, Hartig, Patil, Martinsen, and Kirkevold (2011) who found that horticultural activities ameliorated depression particularly through providing the person with a sense of meaning in their lives which had, to some degree, been lost. The authors of this research advocated for a non-traditional approach to reducing depressive symptoms and improving long-term health outcomes for this population (Shacham et al., 2012, p. 1241).

Corazon, Stigsdotter, Moeller, and Rasmussen (2012) describe a theoretical framework for nature-based therapy at the Healing Forest Garden Nacadia in Denmark. The framework integrates psychotherapeutic concepts with nature-based work for individuals struggling with stress-related disorders. Elements of mindfulness and acceptance-based therapy are combined with principles from permaculture to allow clinicians a guided way to work with clients. Acceptance-based therapy, particularly acceptance and commitment therapy (ACT) is similar to cognitive behavioral therapy (CBT) in that attention is paid to one's thoughts, however, tends to differ in that in CBT, efforts are made to change one's thoughts and thought patterns, where as in acceptance-based therapies, attention is paid to observing and not attaching to one's thoughts.

One example given is that of the permaculture principle, to "observe and interact," which refers to the importance of simply observing nature and gaining an understanding of the way in which it operates before one attempts to alter it or interact with it in any other way. Indeed, this is the very first rule of permaculture. This concept is integrated with mindfulness and acceptance-based concepts of bringing a mindful awareness to one's life and to achieve acceptance through learning that, just like in nature, life is in many ways uncontrollable and is continually changing. The authors use a helpful metaphorical example, "we can initiate action by planting seeds, but we cannot control the outcome" (Corazon et al., 2012). This article introduces key concepts such as acceptance and mindfulness, concepts that might be alternative ways of describing what Gonzalez, Hartig, Patil, Martinsen, and Kirkevold (2010) might name "being away" and "fascination." In both articles, the authors are suggesting a grounding into present reality, rather than a preoccupation with what has already happened, and what has yet to happen. The authors in this article note that this is a framework that has yet to be empirically supported but will be the basis for planned research. Therefore, though this theoretical framework is supported with research, the results of its application have yet to be seen.

Igreja, Kleijn, Dias-Lambranca, Hershey, Calero, and Richters (2009) focused on assessing whether or not agricultural work affected the prevalence and remission of PTSD over time with survivors of the Mozambican war (1976 - 1994). Igreja et al. (2009) hypothesized that troubling symptoms would be less severe when individuals are fully engaged in the growing season and more severe during periods of inactivity. Noting a dearth of non-Western literature, and the centrality of the experience of war, the traumatic experiences of the participants in this study were profoundly different from those in the West, and the researchers were careful to include these differences in their assessments. For example, experiences could be losing a

family member to family living naked for most of the time, living in a hole in the ground, witnessing the murder of strangers and others (Injera et al., 2009). Indeed, results found that over 70% of participants experienced at least 11 traumatic events. Measures included a variety of surveys and questionnaires assessing PTSD symptoms and experiences and because of illiteracy, were given verbally. The measures were taken at three different times during a one-year growing cycle, but notably, at the end of the growing season (period of less activity) and at the beginning. Results supported the hypothesis in that the majority of participants experienced heightened PTSD symptomatology during the end of the growing season and less during the active period. Though this study was very carefully executed, one notable limitation is a lack of a control group, as all of the participants had to farm in order to produce food for survival. This study is the first I have found that addresses the relationship between agricultural work and PTSD experiences and the authors spoke to a lack of literature regarding this relationship as well and advocated for further study in this area as a result of their findings.

Kugler, Bloom, Kaercher, Truax, and Storch (2012) focused on the presence of somatic symptoms in a qualitative assessment of 161 children residing in a residential treatment home who had experienced neglect and/or abuse. This article contextualizes some of what van der Kolk spoke to regarding the ways in which the body is affected by traumatic experiences. The children and their primary caregivers were given various assessments that measured trauma symptoms, anxiety, depression and behavior. Exposure to trauma has been associated with increased rates of somatic symptoms such as stomachaches, headaches, and muscle tension (Hensley & Varela, 2008). These symptoms may interfere with daily functioning and can negatively affect "social, academic, and emotional well-being due to impairment in memory and learning, missed school days, and decreased sleep" (Campo, Jansen-McWilliams, Comer, and

Kelleher, 1999, p. 662). Though this article does have its limitations, including lack of a standardized measurement for somatic symptoms, no information on possible organic physical problems that may cause somatic symptoms to occur and more, the study does cautiously indicate that over 95% of children endorsed at least one somatic symptom (Kugler et al., 2012, p. 679). Additionally, children who experienced sexual abuse had higher rates of somatic symptoms than children who had not. Lastly, these findings were highly correlated with anxiety, depression, posttraumatic stress, dissociation, and anger (Kugler et al., 2012, p. 670). This article was of primary relevance to my research question because it shows the prevalence of somatic symptoms in individuals who have experienced trauma that has led to a trauma-related diagnosis.

A 2011 article by Howard Lorber focused on the use of horticultural therapy in private practice settings for clients experiencing post-traumatic symptoms. Lorber writes comprehensively about an increased incidence of post-traumatic stress disorder, a need for stronger skilled clinicians to work with this population, and suggests integrating horticultural therapy use in conjunction with EMDR (eye-movement desensitization and reprocessing) and narrative therapy (and CBT, if needed) as a holistic treatment model. His article is, of course, very relevant to my project but still holds a strong delineation between horticultural therapy and what I envision as farm work. Lorber adheres to horticultural therapy principles of passivity, acknowledging that simply being in and viewing nature is therapeutic in many ways by itself. However, by attempting to integrate "being in nature" in a private practice setting, he modifies treatment to bring nature indoors, an accessible and creative form of integrating the value of the outdoors. Lorber provides a sample treatment plan where the clinician and client engage with soil in a small (but theoretically significant) way by simply planting a small plant, perhaps an

herb or small flower, into a pot. Lorber's theoretical treatment model is important because he acknowledges the use of horticultural therapy as one part of a larger system of treatment modalities and I think his treatment suggestions hold value in the treatment of this population.

The literature reviewed is intended to speak broadly to topics relevant to my own study of the relationship between agricultural work and PTSD. The broad nature of the literature included indicates primarily that my study needs to be done. Though there is much research addressing therapeutic horticulture, my study differs from this paradigm. Relf (2005) defines therapeutic horticulture as necessitating the following: a client with a diagnosis, living plants, and measurable goals, all under the supervision of a trained professional. This is a very necessary operational definition for future research and makes an important delineation between my study of farm work and that of therapeutic horticulture. Indeed, much of the research I have reviewed addressed alternative treatment models such as the wide use of contemporary and alternative treatments ranging from herbal therapies and biofeedback, to yoga used to reduce PTSD symptomatology, to a combination of bodywork and psychotherapy for women in recovery from childhood sexual abuse. Both Gonzalez, Hartig, Patil, Martinsen, and Kirkevold (2010) studies focused on trying to parse out exactly what it is about working in a garden that can be helpful for individuals with a diagnosis of depression - is it having psychological distance from the thoughts and feelings that typically occupy their mind and body? Is it the feeling of being "in the zone", what the authors refer to as "fascination", that directs our attention away? Do we find existential meaning in being in nature, suddenly made aware of the "bigger picture" as we see ourselves shifting alongside the seasons? The literature also spoke to studying various populations, from individuals living with HIV/AIDS who work on an urban farm, to survivors of the Mozambican War, to children who had experienced neglect and/or abuse. The literature

reviewed is broad and indicates a need for further research in this area. As the number of farms are increasing and diversifying, so to are the individuals who work on farms. Further research is needed to contribute to our increasing understanding of the myriad of ways we work with mental illness.

CHAPTER III

Methodology

There is an increasing constellation of literature that speaks to the relationship between the mind and body, trauma and the benefits of being outdoors. For this reason, the purpose of this study was to assess the specific benefits for individuals with traumatic histories to working on an agricultural farm. This project was designed as an exploratory mixed methods study to attempt to explore whether the hypothesis that such work can reduce trauma symptoms is supported. Utilizing an anonymous online survey to assess participants' experiences and symptom relief due to farm-work, some open ended questions were included to gather narrative data from participants but primarily the survey consisted of multiple choice, closed-ended questions in order to gain explicit answers. The rationale for choosing an anonymous online survey was to allow for a greater number of participants but also to reduce the fear and stigma that a direct face-to-face interview might elicit for an individual living with PTSD. Participants could answer the survey in the comfort of their home, at any time. Participants also had the comfort of exiting the survey at any time, something that might be more difficult in an interview or other format. For the purpose of definitions, the symptomatic definition of posttraumatic stress disorder was stated earlier. It is important to distinguish between a garden and a farm, however, as there are both significant and slight differences. The U.S. Department of Agriculture (USDA) defines a farm as, "any place from which \$1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the year" (2014). There is increasing ambiguity between a farm, garden, urban farm, educational garden and others

to express the shifting picture of how food in the United States is grown. For the purposes of my research, I built upon the definition of farm from USDA to also include a plot of land that is at least one-acre in size. Is it possible that this will reduce the number of urban farms and other garden/farm businesses; however, it still leaves available a breadth of farm options available.

Sample

The population my project was interested in were individuals who had experienced symptoms of posttraumatic stress disorder and had worked at a farm. I did not delineate geographic boundaries to allow for a greater breadth of possible responses and to increase accessibility. I used a nonprobability sampling method of purposive sampling because each participant had particular knowledge about the experience of PTSD symptomatology and farm work and was willing to provide information about those experiences. With purposive, nonprobability sampling, generalizability was not the intention as I was curious about the value of a specific set of criteria, that is, the value of farm work as a possible treatment option for PTSD. Participants met all of the following inclusion criteria: A) The participant must have a diagnosis of posttraumatic stress disorder (PTSD) as given by a licensed clinician; B) The participants must have worked on a farm in some capacity (part-time or full-time) for at least six months; C) The participants' experience of farm work must have occurred within the past two years. Participants were required to self-select that they meet the criteria; those who do not were exited from the survey.

A potential bias was my own experience with farming which has been beneficial for my physical and mental health. I have also personally seen this reflected anecdotally in friendships I have had with farm volunteers and employees. One intention of an anonymous online survey was to mitigate any potential effects of this bias. An asset of my relationship to farm

communities was an increase in feasibility as I am affiliated with some networks of farmers, all of whom I could connect with through email or social media. I attempted to create a sample size that is rich in diversity however expected participants to reflect the farm communities in which they live and work, something I ultimately had only a small degree of control over, as my survey will be made available online to anyone who sees it and meets criteria. This study was available to all individuals, across ability, gender, racial/ethnic, and class spectrums but was specific to individuals who at least had a diagnosis of PTSD.

Recruitment for the survey was initiated through many online avenues, to reach a wide geographic range of potential participants. I utilized social media, including Facebook and LinkedIn to reach out to friends, family, colleagues and organizations whose members might meet criteria for my project. I utilized email to reach out to personal contacts including members of the local farming community in Rhode Island (e.g., Farm Fresh Rhode Island). My recruitment tools shared similar features of introducing potential participants to the study by providing an overview of what the study was about and that it was for my Master's thesis, explaining the inclusion criteria, and providing a link to the survey itself.

Ethics and Safeguards

The thesis proposal was submitted to the Human Subjects Review (HSR) board at Smith College School for Social Work and was approved before my study became available and data collection began. One key component of the study is the informed consent form, which all eligible participants were required to agree to, in order to move forward to the questions themselves. Individuals were given the option to decline the informed consent at which point they were exited from the study. In keeping with federal regulations regarding working with human subjects (U.S. Department of Health and Human Services, 2009), all research material

including the data, analysis, and consent documents will be secured for three years, after which point they will be destroyed. Further, all relevant files are individually password protected on a password-protected computer.

The informed consent form carefully explained the purpose of the study as well as the procedure they will be guided through. The primary benefit of the study is that individuals were given an opportunity to reflect on their experiences of living with a diagnosis of PTSD as well as that of working on a farm. Additionally, participants contributed to the way that social workers collectively, think about and define ideas of mental illness, mental wellness and treatments. The risks and benefits of participation were also carefully delineated, and a number of resources were listed should individuals have needed guidance in the event the study became distressing for them. Individuals were strongly encouraged to consider the possibility that they might become distressed or triggered and to be certain completing the study felt like an option that would allow them to maintain wellness. Self-identifying as living with a major mental illness, PTSD is often a sensitive issue for those individuals, so a crucial component of maintaining the ethical principle of respect was to ensure the complete anonymity of the participants (U.S. Department of Health and Human Services, 2009). I did not collect email or IP addresses. Individuals were informed that if they contacted me via email with questions about the study, they were forfeiting their anonymity. Participants could, of course, exit the survey at any point and their responses were not collected.

Data Collection

Participants had access to the mixed-methods, online survey from January 2015 - April 2015. The anonymous survey was hosted by the web service Survey Monkey and consisted of three parts and thirteen questions. Part one included demographic questions, asking participants

to identify their gender, race/ethnicity, and age. Part two focused on questions related to the participants' experience of working on a farm. Participants were guided through questions specifying, for example, what kind of farm they worked on, for how long, and what position they held. Part three focused on the overlap between their farm work experience and living with PTSD. Here, participants were offered the opportunity to elaborate on three open-ended questions. One question, for example, asked participants to specify how they found farm work helpful for managing symptoms related to PTSD, if they found it helpful at all. Another question asked participants to elaborate on how they attempted to manage feeling triggered if it occurred while they were working on the farm. In Part three, participants were also offered multiple choice questions from which they could select as many applicable answers related to questions surrounding their individual symptomatology and ways they had historically attempted to manage their lived experience with PTSD. One question was a Likert-scale directly asking if the participant felt that engaging in farm work was beneficial for helping their attempts to manage their symptoms and experience of PTSD.

One area of weakness of this data collection method is that diversity was not fully embraced through an online survey as only those individuals who have access to a computer, the internet, and are English-speaking were able to participate.

Data Analysis

This mixed-method survey required the use descriptive statistics to analyze the multiple choice and Likert questions and content analysis for the few open-ended questions. I sent a spreadsheet of my quantitative data to Marjorie Postal, research analyst at the Smith College School for Social Work, who assisted with data cleaning and delineating frequency measures.

To analyze the qualitative data, I used open coding to derive similar and divergent themes. The data will be presented in the following chapter.

CHAPTER IV

Findings

The purpose of this exploratory, descriptive study was to assess what, if anything, is beneficial about engaging in agricultural work, or, farm work, for individuals living with posttraumatic stress disorder (PTSD). The qualitative research questions asked participants, “How have you attempted to manage your symptoms of PTSD? What kind of farm work did you do? What, if anything, did you find helpful about farm work for managing symptoms of PTSD? If you experienced feeling ‘triggered’ while working on your farm, how did you manage it?” These questions, in addition to the quantitative questions about the participants, provided a rich view into the benefits of farm work for this population. The Discussion chapter will discuss the implications of the results of this research in greater depth.

Demographics

Thirty-nine respondents completed the online survey for this study. The vast majority accessed the survey on one day in early April. In total, 52 potential participants accessed my survey though 13 did not agree to consent and were exited from the survey at that time. The sample included 16 females (41%), 22 males (56.4%) and 1 transgender participant (2.6%) who ranged in age from young adult to elder, with most participants between 25-34 years of age (41%) (see Table 1). The vast majority of participants were White (82.1%), with only one Black participant, 2 Hispanic or Latino participants, and 4 participants who identified as more than 1 race.

Table 1
Age, Gender, and Racial Identity of Participants

Age Range	Frequency	Valid %
18-21	1	2.6
25-34	16	41.0
35-44	7	17.9
45-54	11	28.2
55-64	4	10.3

Gender	Frequency	Valid %
Female	16	41.0
Male	22	56.4
Transgender	1	2.6

Race	Frequency	Valid %
White	32	82.1
Hispanic or Latino	2	5.1
Black or African American	1	2.6
More than 1 race checked	4	10.3

Farm Experience

The participants represented many employment positions, including 13 farm owners, 10 full-time, paid employees, 6 part-time, paid employees, 7 unpaid volunteer positions, 2 full-time interns, 1 part-time intern, 4 work shares, and a few other various positions that are represented in Table 2. A work share is defined as someone who works an agreed upon number of hours in exchange for a stipend of the crop. A share cropper is defined as a form of tenant farming, in which the landowner allows the tenant to farm the land they live on, in exchange for providing a share of the profit with the landowner. One individual selected that they were both an unpaid volunteer and a workshare. Another individual selected they were a part-time paid employee, a part-time intern, and an agricultural major who kept an urban farm at their home. One weakness

of this question was the exclusion of the option of “owner” from the list of possible answers to choose from. However, everyone who identified this way simply wrote in the answer. One respondent identified as a co-owner which I included with “owner” for conciseness.

Most participants worked in some capacity on a farm for over 2 years (55.8%), while 12 participants (31.6%) worked between 1 and 2 years, and only 5 individuals having worked for less than twelve months (13.2%). The types of product raised on the participants’ farms varied widely from beekeeping, a nut and fruit farm, to medical marijuana, and is best displayed in Table 2, however, most participants grew vegetables, fruit, herbs, or raised some kind of livestock. Many respondents wrote in answers here as well, so percent frequencies were again excluded. An “other” category included one hop farmer, one fruit and nut farmer, one small sustainable farm, and one participant who wrote in dairy goats, laying and meat chickens, vegetables, and medical marijuana. One participant wrote in pastured poultry which was included in livestock.

Participants from across all size farms were present as well, with the vast majority of farm workers hailing from farms that are defined as low-sales small farms with gross sales of less than \$100,000 per year (n=28), though two individuals worked on large commercial farms, defined as having a gross sales more than \$250,000 per year. Three respondents chose not to answer, and two were unsure. Three individuals preferred not to define their farm by gross sales, with two participants specifying theirs was a family farm, and one worker from a 20-acre organic avocado farm; all of these answers were included in “other.”

Table 2
Farm Experience

Position	Frequency	Percent
Owner	13	33.8
Employee, full-time, paid	10	25.6
Employee, part-time, paid	6	15.4
Volunteer, unpaid	7	17.9
Intern, full-time	2	5.1
Intern, part-time	1	2.6
Workshare	4	10.3
No answer	1	2.6
Volunteer, stipend	1	2.6
Share cropping	1	2.6

Length of farm experience	Frequency	Valid %
Less than 1 year	5	13.2
1-2 years	12	31.6
Over 2 years	21	55.3

Type of farm operation	Frequency	Valid %
Vegetable	25	64.1
Livestock	25	64.1
Dairy	4	10.3
Herb	11	28.2
Fruit	10	25.6
Horse	1	2.6
Apiary	3	7.7
Grain	1	2.6
Other	4	10.3
No answer	1	2.6

Size of farm	Frequency	Valid %
Low-sales small farm	28	71.8
High-sales small farm	5	12.8
Large commercial farm	2	5.1
Unsure	2	5.1
No answer	3	7.7
Other	3	7.7

Farming and PTSD

Though all participants self-selected that they had been diagnosed by a licensed clinician with a Posttraumatic Stress Disorder (PTSD) diagnosis, I was curious to learn more about what the individual experiences were like by asking specific questions about symptomatology (Table 3). This question allowed participants to choose as many as applied to them. The two most experienced symptoms of PTSD were that of feeling “triggered”, which was explained as a “strong emotional or physical discomfort to something that reminds you of the event” and changes in emotional reactions. Changes in emotional reactions offered a variety of examples including angry outbursts, aggressive behavior, a feeling of always being on guard, feeling overwhelming guilt or shame, difficulty focusing and/or sleeping, being easily startled or frightened, and self-destructive behavior such as driving too fast or drinking too much. Twenty-eight (71.8%) respondents chose both of these answers. The second most common symptom of PTSD was avoidance of people, places, or things that remind the person of the traumatic experience, which 25 participants selected (64.1%).

The remaining data is displayed in Table 3, which also includes a few individuals who wrote in responses, and two individuals who chose not to answer the question. One individual wrote in that they experienced flashbacks which I included in the answer option “unwanted and upsetting memories of the event.” One individual wrote in that they experienced a startle reflex which I included in the answer option “changes in emotional reactions.” A third respondent wrote in that they were a combat veteran while a fourth wrote that their sons died, which I interpreted to mean this is when their symptoms began; these two responses are delineated as “other.” Lastly, three individuals wrote in that their symptoms decreased or did not occur while farming.

Table 3
PTSD Symptom Experience

Symptom Experience	Frequency	Valid %
Unwanted and upsetting memories of the event	22	56.4
Upsetting dreams about the event	19	48.7
Feeling “triggered”	28	71.8
Avoidance of people, places, and things that remind you of the event	25	64.1
Negative changes in thinking and mood	23	59.0
Changes in emotional reactions	28	71.8
No answer	2	5.1
Other	2	5.1
No symptoms, or symptoms decreased	3	7.8

The second question in this section of the study asked how the participant attempted to manage their symptoms related to PTSD (see Table 4). Like previous questions, many respondents chose more than one answer and many wrote in answers as well. The rationale for this question was to get a sense of how individuals managed their experience of PTSD using more conventionally-oriented therapeutic techniques, as one would typically expect to be told from a professional, or from a self-help book. This definition of care allowed for data to be gained on how this group of participants actually utilizes those recommendations, and also how they deviated, as can be seen from the answers that were written in.

Thirty-six of the 39 participants selected answers from the given options, and eight wrote in answers as well. The most used self-management technique appeared to be taking care of oneself, which was broadly defined with examples of attempting to adhere to a consistent sleep schedule, eating healthy foods, and avoiding or reducing their caffeine intake. This was selected by 30 individuals (76.9%). The second most used self-management technique was exercise, which 29 individuals selected (74.4%). The third was making an appointment with a mental

health professional, such as a doctor or therapist, which 25 individuals selected (64.1%).

Notably, calling a hotline, such as a suicide or veteran's crisis line, was at the bottom of the list, as only 3 individuals (7.7%) selected this. Surprisingly, individuals who joined support groups was also low, as only 5 participants (12.8%) selected this.

As mentioned, eight individuals wrote in answers. Coding these answers presented a predominant theme of "complementary and alternative medicine" or CAM, which appeared in six of eight responses. The National Center for Complementary and Integrative Health (NCCIH, 2015) defines these broadly as "health care approaches developed outside of mainstream Western, or conventional, medicine." These included answers such as yoga, herbal and homeopathic medicines, breathing exercises, gardening, and being alone with animals. One individual wrote:

I smoke and consume cannabis regularly, I became a holistic health based life style. I only eat plant based foods, organic, and gluten free. You have to change the inside first. The stomach is the SOURCE of all emotional upset. PTSD included.

The other two answers that were written in were "self help books and mindfulness classes" and "booze", both of which were included as "other."

Table 4
Self-Management of PTSD Symptoms

Self-Management Techniques	Frequency	Valid %
Reaching out to a friend or loved one	21	53.8
Reaching out to someone in your faith community	11	28.2
Making an appt. with a mental health professional	25	64.1
Joining a support group	5	12.8
Calling a hotline	3	7.7
Medication	21	53.8
Taking care of yourself	30	76.9
Exercise	29	74.4
Contemporary and alternative medicine	6	10.3
Other	2	5.1

The next question asked participants to write about what kind of work activities they engaged in on the farm and all 39 individuals answered. I coded their answers for themes and found that most respondents included some reference to harvesting and caring for livestock. All of the answers given were fairly straight forward, with farm work broadly being delineated into three categories: non-livestock farm work, livestock farm work, and general farm work which would include things like maintaining farm equipment, marketing, and managing farm finances. Non-livestock farm work often included terms like digging, plowing, seeding, planting, weeding, mowing, pruning, tending, irrigation, and of course harvesting. Livestock farm work included terms like feeding, watering, breeding, treating, milking, processing, butchering, fencing, and paddocks. Unsurprising for farm workers, a few respondents simply wrote that their responsibilities were too many to name. One respondent diverged from the rest and wrote that tending to her farm was her “therapy and the only thing that keeps me off medication.” Due to the length of these answers, they will be included in Table 5 in the Appendix.

A straight-forward Likert scale asked participants if they felt that working on a farm was beneficial for helping them to manage their symptoms of PTSD. Thirty-seven of the thirty-nine

respondents answered this question with an overwhelming positive response. All but one respondent answered “extremely helpful” (n=23) or “very helpful” (n=13). No one chose “not at all” and one person chose “slightly helpful.” This simple scale set the stage for the next qualitative question which allowed participants to write in, as specifically as possibly, what, if anything, they found helpful about farm work for managing their symptoms of PTSD. All participants responded to this question and their answers were coded for themes. Direct quotes will be included to articulate these themes.

Farming necessitates present-orientedness

Farming for me, means I have to be present to be able to observe what needs to be done, to be able to know how to prioritize which crops need watering, which don't, which insects are out of control and a remedy must be utilized soon. It makes me present. When I am farming- I am farming, nothing else. It requires my all, my being there or maybe that's why it's so conducive to healing- with farming, everything is alive, growing is ever present. I am not faced constantly with "what if?" I'm surrounded by what is- it's grounding. I am facing the present moment, not the past overwhelming me- it's just a very powerful influence, often more powerful than my own thoughts.

My mind is focused on the moment - care & management of livestock is often an immediate need. Being in the moment to care for plants keeps me focused. Flashbacks and moments of sorrow are less when I function in the needs of the farm.

Being present in the moment, staying busy physically kept my mind busy...

I have to calm down before I enter the apiary. Bees respond to stress hormones and so I need to not be stressed before working with bees. It is slow going work that takes a lot of patience and I use the techniques to manage my anxiety with the bees to calm down my PTSD symptoms. Also after working outside all day, I am so tired that I just sleep better.

I found more often than not, it kept me present. Physical activity kept my mind off of things.

Responsibility to others: animals, customers, community

Watching new life being born or growing... Fosters hope, helps to get back in community through selling food, ... farm responsibilities make sure you get up and moving each day- animals depend on you.

When the negative thoughts and feelings of hopelessness overwhelm me, I still have to get out of bed and feed and water my animals. Still have to collect, wash and pack eggs for my customers that depend on my weekly deliveries.

Having little animals that need me.

In order to make a profit I must force myself to interact with the community and meet new people. This was extremely difficult for me to do at first but I am becoming more comfortable with this every day

It is ... very rewarding to know that my work produces healthy food which sustains human life.

Being an active "hands-on" contributing member of a farming community that daily practices "mindfulness" emotional/cognitive awareness while simultaneously continuing to "chop wood and carry water" for the benefit of both the community's interdependence as well as my own independence and self-care practices.

Knowing that what we're growing or raising in livestock is going to help others and it's all being done for a purpose bigger than myself.

I know I am helping out [sic] environment by Beekeeping.

Autonomy to create safe environment, including solitude

I am away from people, I can focus on the work at hand and I rarely if at all have to answer to anyone.

Allowed me to "rejoin society" on my terms through farmers markets and other community projects. After a year, I was returned to the workforce and used farming as my stress relief at the end of the day.

Not dealing with people.

Allows me time to work thru my emotions, animals don't judge. I own a pig farm. My big sow can sense when I am having a hard time and she comes to me and let's me rub her, cry on her and sometimes just talk it out to her. She understands more than any doctor ever could.

I don't have to deal with people all day. ... Trees and animals don't argue or fight with you or piss you off. I am my own boss. I don't have to work with anyone I don't want to. I feel safe; only my family and friends ever come by. I can see for acres in all directions. My service dog can work by my side.

Working alone has helped me, connecting with down to earth people that enjoy hard work.

Ability to be and work alone at own pace and without supervision, non-judgmental companionship from plants and animals.

Having mission oriented work without to [sic] many civilians.

I work more on the farm side and my wife works more on the ranch side. I do not like the ranch side because I can not predict what the animal will do and I can not get them to do what I need the to do. As my wife puts it she works with the things that have eyeballs I work with thing that do not have eyeballs. I feel safe farming because the threat level of the plants is low to none. I know they will not jump out and get me like the cattle will.

Feeling connected with nature

The solitude and peace in the garden, the birds singing and flying around, but mostly the bees became fascinating to me.

It's calming, gives me a sense of purpose, and can be some what spiritual to feel in tune with nature.

Connection to nature; a groundedness; and in some strange way it connects me positively with some of the people I remember seeing in Iraq--the farmers or the people who had sheep wandering in their front yards. It is routine work with a physical component yet it is always different everyday. It connects one with living, growing things. Notre [*sic*] them, nurture oneself. Gives something to focus on and even at times something to talk to. While the work can seem overwhelming in terms of type and quantity, there is a spirituality that happens in a garden (farm)....it's real and dirty and gritty. ...Perhaps like war itself but it is focused on life not death. :) (I'm vegan and not working where animals are harmed)

Beauty of nature.

Watching new life being born or growing...

As I am growing and understanding my condition I am able to grow and understand life around me. I find it very peaceful and forgiving at the same time. By producing my own

food I am able to be more self- sufficient and I enjoy eating the foods I grow that proved much better nutrition then I would be able to afford otherwise.

I truly "found myself" on the farm, there is something truly grounding about tilling the earth, extracting a product from nature itself. I found I loved all aspects of my job but watering was probably my favorite ritual.

The last question of the survey asked participants to identify if they ever experienced feeling "triggered" while farming, and if so, to explain how they managed it. The definition given for the word triggered was "experiencing a strong emotional or physical discomfort to something that reminds you of the [traumatic] event." Of the 39 participants, 13 selected that they had never experienced being triggered while on that farm. An additional 9 chose not to answer, and the remaining 17 wrote in answers.

The answers varied greatly and were subsequently impossible to effectively code for themes. Some respondents wrote about incidents in which they were triggered, but did not write about how they managed those experiences in that moment. Some examples of these responses are as follows:

There are occasional sounds and smells that can trigger emotional responses for me. I know [*sic*] associate these with the farm versus the past memories.

Being around brush fires can be tricky, as well as smelling diesel in the heat.

Triggers happen for me at night and when I'm inside.

Mostly old tapes of abusers telling me that I'm not worthy, making comments, presuming the worst about me.

When I weed I do a lot of thinking so sometimes I would have memories and thoughts that were distressing.

Emotional discomfort triggered by intrusive thoughts during meditative or contemplative periods on the farm.

However, other responses did provide some insight into both the triggering experience, and the ways in which they attempted to manage the situation, with varying degrees of specific delineation of what was helpful.

Keep feeding and watering the animals.

Only the animals saw and they are not talking.

I trigger all the time. But I just use mindfulness and take a moment to assess my fear response.

Yes, connecting back to Iraq, sometimes just the way the air feels or smells in the early morning or evening, especially in the fall. But I "dance" with my memory and let them come, say hello, maybe cry, talk to the goats, remember and say a prayer for me and the Iraqis.

I got a phone call once that was pretty staggering...I won't go into it, but it triggered something. I felt like running, screaming even, I was a bit frantic...trying to get ahold of myself. I tackled a weedy bed that I had avoided up to that point. Weeding is the best damn therapy there is – often times I'm spitting and talking as I pull them out by the roots. When I'm done, I'm spent – but so often is my rage, fear and sadness too.

Yes had panic attacks on the farm. Being on the farm allowed me to focus on the moment and realize I was safe.

Though this question did not receive a significant or consistent response rate, the responses did still provide some valuable connections to the previous question where the participants were asked to write about specific ways in which farming was helpful for managing PTSD in their lives. In the latter question some responses were provided that displayed real, lived experiences of feeling triggered while farming, and evidence of the four themes outlined above: farming necessitates present-orientedness; having responsibility toward others, whether animals, individuals, or community; having the autonomy to create a safe environment, sometimes including solitude; and feeling connected with nature.

CHAPTER V

Discussion

As stated previously, the purpose of this exploratory, descriptive study was to assess what, if anything, is beneficial about engaging in agricultural work, or, farm work, for individuals living with posttraumatic stress disorder (PTSD). The qualitative research questions asked participants, “How have you attempted to manage your symptoms of PTSD? What kind of farm work did you do? What, if anything, did you find helpful about farm work for managing symptoms of PTSD? If you experienced feeling ‘triggered’ while working on your farm, how did you manage it?” This chapter will highlight the results and implications of this research, review the implications in the context of existing literature, and discuss potential relevance for clinical social work theory and practice in particular.

When reviewing the demographics of the participants, it is clear that the majority were White males, with the largest representative group of workers self-identifying as farm owners of low-sales small farms. While it was not possible to analyze individual characteristics due to the confidential nature of the survey, current data on national demographics of farms in the United States do reflect, to some degree, the data gained in this research. That is, most farmers in the United States are White, male, land owners, according to a 2012 census of farmers compiled by the United States Department of Agriculture. This has long been the history of American farmers and is not unexpected. However, what was surprising in this research was the significant number of females who participated, with 16 participants out of 39.

When thinking about these demographics from a social work theory perspective, thinking critically about who becomes farm owners and why is always pertinent. In particular, a more careful examination of the historical significance of land ownership by White men might shed light onto why the vast majority of U.S. farm owners are White. Contextually, “About half of all laborers and supervisors are Hispanic, while managers are mostly non-Hispanic whites” in the United States agricultural system (USDA, 2014). Though small farms in particular are indeed diversifying, the small percentage of people of color who were able to access this survey was troubling. The lack of access by people of color might have many explanations: poor recruiting, English-only survey instruments, and online recruitment only. For a more comprehensive examination of participants with PTSD who may benefit from farming, a more thorough recruitment process could be utilized. For example, as we know that most farm workers are Hispanic or Latino males, it is highly likely that this research would have differed tremendously if the recruitment materials were available on paper, in Spanish languages, and recruitment took place on farms with hired workers with a Spanish-speaking recruiter. Other conceptualizations of alternative recruitment efforts might be in vivo recruitment in inner city farm communities, often heralded as enclaves that challenge white supremacy in farming.

Additionally, it is clear from some of the qualitative data that participants were veterans however this was not something that was asked in the survey, and thus remains unknown. PTSD can be experienced by anyone though certain communities do experience higher incidence rates, including veterans. For example, according to a 2014 report from the U.S. Department of Veterans Affairs highlights that about 11 to 20 out of every 100 veterans (or between 11-20%) who served in Operations Iraqi Freedom (OIF) and Enduring Freedom (OEF) currently have PTSD in a given year. Vietnam veterans are estimated with even higher incidence rates, around

30%, or 30 out of every 100 Veterans. Though this researcher did recruit with the few organizations that connect recent veterans with farming opportunities in mind, a more careful examination of this status may have benefited this study and thus, would be beneficial for future research.

An examination of the qualitative data presented exciting findings. Almost all of the participants did find that farm work was beneficial for them as they managed a PTSD diagnosis. Themes were clear: farming necessitates present-orientedness; having responsibility toward others, whether animals, individuals, or community; having the autonomy to create a safe environment, sometimes including solitude; and feeling connected with nature. Additional themes were present, though not in a significant amount, and included: feeling too tired from farming to be upset; engaging in physically productive work; feeling grounded; participating in natural cycles; feeling a sense of purpose, meaning, or accomplishment, the predictability of farming; and not feeling judged by others while farming. These all presented themselves in small ways in the data presented, but were not spoken to exclusively. Lastly, almost all of these themes speak to the literature reviewed previously by Gonzalez, Hartig, Patil, Martinsen, and Kirkevold (2011) which found that engaging in horticultural work in particular ameliorated depression severity and existential issues. That is, there is tremendous benefit in finding meaning in the work that you do, and feeling like you are contributing to something larger than yourself.

One surprising finding from the qualitative data was the number of participants who wrote that being away from people was beneficial for them. This result did seem to closely tie in with the ability to create a safe environment for oneself and the autonomy to do so, however, this finding was explicitly stated by multiple participants. This has implications for clinical social

work theory and practice as indeed, a guiding premise of clinical work focuses on connection with others and a recognition that often, disconnection and alienation can exacerbate symptoms of many diagnoses. I wonder if it is not that participants prefer to be alone, but rather that they prefer to have the choice of who they engage with, why, and when, in an effort to keep themselves safe. A couple of participants did speak to this idea, that farming was a sort of baby-steps toward engaging with the larger community.

Though implications for future research were included throughout this Discussion, the recognition that very little research exists at all to examine the relationship between farming and individuals living with PTSD is a reality that will hopefully be assessed more in the future. The face of farming is changing, and it is becoming more diverse. In time, the research will reflect these changes, and with it, access to the benefits of farming for all individuals will increase. The wisdom gained from these participants in this study are only one contribution toward that future.

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APPENDIX A

HSR Approval Letter



School for Social Work
Smith College
Northampton, Massachusetts 01063
T (413) 585-7950 F (413) 585-7994

January 29, 2015

Mindy Walls

Dear Mindy,

You did a very nice job on your revisions. Your project is now approved by the Human Subjects Review Committee.

Please note the following requirements:

Consent Forms: All subjects should be given a copy of the consent form.

Maintaining Data: You must retain all data and other documents for at least three (3) years past completion of the research activity.

In addition, these requirements may also be applicable:

Amendments: If you wish to change any aspect of the study (such as design, procedures, consent forms or subject population), please submit these changes to the Committee.

Renewal: You are required to apply for renewal of approval every year for as long as the study is active.

Completion: You are required to notify the Chair of the Human Subjects Review Committee when your study is completed (data collection finished). This requirement is met by completion of the thesis project during the Third Summer.

Congratulations and our best wishes on your interesting study.

Sincerely,

A handwritten signature in black ink, appearing to read 'Elaine Kersten'.

Elaine Kersten, Ed.D.
Co-Chair, Human Subjects Review Committee

CC: Fred Newdom, Research Advisor

APPENDIX B

Human Subjects Informed Consent Form



Introduction

- You are being asked to be in a research study assessing if engaging in farm work is beneficial for individuals living with posttraumatic stress disorder, or PTSD. You must have had a diagnosis of PTSD before you began farming.
- You were selected as a possible participant because you have a diagnosis of posttraumatic stress disorder (PTSD) and have engaged in manual farm labor for a period of one growing season, or six months, within the past two years. You must also be at least 18 years old and be able to read and write in English. Individuals could range from occasional volunteers, paid workers, interns, workshares (who work in exchange for a share of product) and is meant to allow for a range of working experiences.
- We ask that you read this form and ask any questions that you may have before agreeing to be in the study. I can be reached at mwalls@smith.edu with questions. If you choose to email me, be aware that your responses will still be anonymous, though I will be aware that you have viewed the study and are interested in participating.

Purpose of Study

- The purpose of the study is to assess possible benefits of farm work for individuals living with posttraumatic stress disorder, or PTSD.
- This study is being conducted as a research requirement for completion of my Master's in Social Work.
- Ultimately, this research may be published or presented at professional conferences.

Description of the Study Procedures

- If you agree to be in this study, you will be asked to do the following things: I will ask four screening questions to ensure you meet the inclusion criteria. If you meet inclusion criteria, you will then be led through an anonymous survey that should take no longer than ten minutes to complete.
- The four screening questions assess to ensure the following criteria needed to complete the survey: You must also be at least 18 years old, have a diagnosis of posttraumatic stress disorder, have worked on a farm engaging in manual farm labor for at least one growing season, or six months, within the past two years, and be able to read and write in English.

Risks/Discomforts of Being in this Study

- The study has the following risks. First, some of the questions asked may induce feelings of discomfort or upset related to living with the diagnosis of posttraumatic stress disorder (PTSD) in some capacity in your life, even if you are recollecting a time you have worked on a farm.
- I strongly caution individuals who have concerns about how these feelings of discomfort or

upset might affect you to consider not completing the survey. Should you decide to complete the survey, take a moment to consider how to seek help if you feel you might need it.

Referral Sources

1) If you are in crisis, call 911 immediately or visit your nearest Emergency Room.

2) National Suicide Prevention Hotline, available 24 hours a day, 7 days a week

Website: <http://www.suicidepreventionlifeline.org>

Phone (in crisis): 1-800-273-TALK (8255)

3) National Center for PTSD Initially created through the Department of Veteran's Affairs, the Center offers extensive information regarding PTSD including resources for civilians and veterans seeking help.

Website: <http://www.ptsd.va.gov/public/where-to-get-help.asp>

Phone (in crisis): 1-800-442-HOPE (4673), available 24 hours a day and 7 days a week

4) Contact your primary care doctor for a recommendation if you are seeking a therapist.

Benefits of Being in the Study

- The benefit of participation is in having the opportunity to reflect on your experience living with a diagnosis of posttraumatic stress disorder and working on a farm.
- The benefits to social work/society are: Social work is an endlessly inventive field full of individuals who are committed to broadening the ways in which we, collectively, think about and define ideas of mental illness, mental wellness and treatments. There is not a lot of research on the specific relationship between PTSD and farm work and the service of the body in negotiating that relationship and my research project will contribute to this growing field.

Confidentiality

- This study is anonymous. I will not be collecting any information about your identity, including your email and IP address.
- If you choose to email me, be aware that your responses will still be anonymous, though I will be aware that you have viewed the study and are interested in participating.

Payments/gift

- You will not receive any financial payment for your participation but I do offer my thanks for being willing to take the time and effort to contribute to my research efforts.

Right to Refuse or Withdraw

- **The decision to participate in this study is entirely up to you.** You may refuse to take part in the study at any time without affecting your relationship with me, the primary researcher. Your decision to refuse will not result in any loss of benefits (including access to services) to which you are otherwise entitled. **You have the right not to answer any single question. You may stop participating at any point in this survey by simply clicking exiting your browser window at which point all material will be eliminated. Once you click "SUBMIT" you will not be able to withdraw.**

Right to Ask Questions and Report Concerns

- You have the right to ask questions about this research study and to have those questions answered by me before or after the research. I can be reached at mwalls@smith.edu. If you email

me directly I will be aware that you are interested in participating, though your responses will still be anonymous. If you have any other concerns about your rights as a research participant, or if you have any problems as a result of your participation, you may contact the Chair of the Smith College School for Social Work Human Subjects Review Committee at (413) 585-7974.

By clicking "I AGREE", you are indicating that you have decided to volunteer as a research participant for this study, and that you have read and understood the information provided above. By clicking "I DISAGREE", you will be exited from the survey.

☐ I AGREE

☐ I DISAGREE

APPENDIX C

Survey

Screening Criteria

Are you 18 years of age or older?

Are you able to read and write in English?

Have you worked on a farm in some capacity (employee, volunteer, work share, intern or other) for at least 6 months within the past 2 years? For this study, a farm is defined as being at least one-acre in size.

Did you have a diagnosis of PTSD, or posttraumatic stress disorder, by a licensed mental health clinician before you began working on a farm?

If you answered YES to these criteria, you are eligible to participate. Click "NEXT" to proceed to the study.

If you answered NO to any of these criteria, please click "DONE" to exit the study.

☐ NEXT

☐ DONE

Part I: Demographic Questions

The following questions will ask you about yourself. You may skip any question you are uncomfortable answering. Please answer the questions to the best of your ability.

1. What is your gender?

Female

Male

Transgender

Write in: _____

Prefer not to answer

2. What is your age range?

18-24 years old

25-34 years old

35-44 years old

45-54 years old

55-64 years old

65-74 years old

75 years or older

Prefer not to answer

3. What is your racial/ethnic identity?

White

Hispanic or Latino

Black or African American

Native American or American Indian

Asian / Pacific Islander

Write in: _____

Prefer not to answer

Part II: Farm Experience

The following questions relate to your experience working on a farm.

1. What was/is your position?

Paid full-time employee (At least 36 hrs per week)

Paid part-time employee (Less than 36 hours per week)

Volunteer (unpaid)

Intern full-time (paid or unpaid)

Intern part-time (paid or unpaid)

Workshare (work in exchange for share of product)

Other (write in)

I prefer not to answer

2. How long have you worked at a farm?

Less than 12 months (1 year)

12 months - 24 months (1-2 years)

Greater than 24 months

I prefer not to answer

3. What kind of farm operation was your experience at? Select all that apply.

Vegetable farm

Livestock farm (e.g. pig, poultry, beef, goat, etc.)

Dairy farm (e.g. goat, cow, etc.)

Herb farm

Fruit orchard

Fish farm

Other (write in)

I prefer not to answer

4. What size farm was your experience at? Select all that apply.

Low-sales small farm (gross sales less than \$100,000 per year)

High-sales small farm (gross sales between \$100,000 and \$249,000 per year)

Large commercial farm (gross sales more than \$250,000 per year)

I am not sure

I prefer not to answer

Part III: Experience with Posttraumatic Stress Disorder (PTSD) and agricultural work

The following questions are concerned with your experience with PTSD and agricultural work.

1. How many of the following PTSD symptoms have you experienced during the time you were farming? Select all that apply.
 - Unwanted and upsetting memories of the event
 - Upsetting dreams about the event
 - Strong emotional or physical discomfort to something that reminds you of the event (e.g., sometimes called feeling "triggered")
 - Avoidance of people, places, and things that remind you of the event
 - Negative changes in your thinking or mood (e.g., negative feelings about yourself and others, difficulty feeling positive emotions, poorer memory, feelings of hopelessness, decreased interest in activities and difficulty maintaining relationships with others)
 - Changes in emotional reactions (e.g., angry outbursts, aggressive behavior, a feeling of always being on guard, overwhelming guilt or shame, difficulty focusing and/or sleeping, being easily startled or frightened, self-destructive behavior such as driving too fast or drinking too much)
 - Other (Write-in)
 - I prefer not to answer
2. How have you attempted to manage your symptoms related to PTSD? Select all that apply.
 - Reaching out to a friend or loved one
 - Reaching out to someone in your faith community
 - Making an appointment with a mental health professional (e.g., doctor, therapist)
 - Joining a support group
 - Calling a hotline (e.g., suicide hotline, veteran's crisis line)
 - Medication
 - Taking care of yourself (e.g., attempting to adhere to a consistent sleep schedule, eating healthy foods, avoiding or reducing your caffeine intake)
 - Exercise
 - Other (write-in)
 - I prefer not to answer
3. Please tell me about what kind of work activities you engaged in on the farm. For example, harvesting vegetables, or giving grain to livestock.
 - (Write-in)
 - I prefer not to answer
4. Do you feel that working on a farm was beneficial for helping you to manage symptoms of PTSD?
 - ☐ Extremely helpful ☐ Very helpful ☐ Moderately helpful ☐ Slightly helpful ☐ Not at all helpful ☐ Prefer not to answer

5. Please tell me what, if anything, you found helpful about farm work for managing symptoms of PTSD. Be as specific as you can.

(Write-in)

(Include check box for option that reads: I did not find working on a farm beneficial for managing symptoms of PTSD.)

I prefer not to answer

6. Did you ever experience a feeling of being "triggered" in some way while you were on the farm? If so, how did you manage that experience?

(Write-in)

(Include check box for answer: I did not experience feeling triggered while working on a farm.)

I prefer not to answer

"Triggered" is defined earlier in the survey as "strong emotional or physical discomfort to something that reminds you of the event."

Submission Page

Do you wish to submit your survey responses now?

☐ SUBMIT

If you do not wish to submit your survey responses, simply exit your browser window. Again, this survey is anonymous.

APPENDIX D

Recruitment, Email

Hello,

My name is Mindy Walls and I am a graduate student at Smith College School for Social Work in Northampton, MA. I am reaching out to you with the hope that I can be connected with potential participants for my IRB-approved research project that I am working on toward my Master of Social Work degree assessing the benefits of farming for folks with a diagnosis PTSD (posttraumatic stress disorder).

I am trying to recruit up to 50 participants which may not sound like a lot, but I could use all the help I can get with this population that can be quite difficult to access!

I am requesting that the following information be shared widely through any networks you may have where farmers, veterans and any other potentially applicable folk might access it. This might include listserv, email and/or social media communication that would directly reach farmers.

Further, if you have any thoughts on other avenues I might try, I would be grateful.

Thanks for your help, and do let me know if you have any questions or concerns.

Mindy Walls

+++

PTSD + Farming: Requesting Research Participants | FORWARD WIDELY TO FARM LABORERS + MENTAL HEALTH CLINICIANS

I am assessing the benefits of farm work for individuals with a diagnosis of posttraumatic stress disorder (PTSD).

My survey is online, anonymous, and should not take longer than 10 minutes to complete.

I am looking for individuals who have worked on a farm for at least one growing season (6 months) within the past 2 years, have a diagnosis of posttraumatic stress disorder (PTSD) that preceded the farm experience, are at least 18 years old, and can read and write in English (simply to be able to complete the survey).

Individuals could range from occasional volunteers, paid workers, interns, workshares (who work in exchange for a share of product) and is meant to allow for a range of working experiences.

<https://www.surveymonkey.com/s/farmingandPTSD>

Please feel free to contact me with any questions at MWalls at Smith dot edu. This research project is for the completion of my MSW degree from Smith College School for Social Work.

If you choose to email me, be aware that your responses will still be anonymous, though I will be aware that you have viewed the study and are interested in participating.

APPENDIX E

Recruitment, Social Media

PTSD + Farming: Requesting Research Participants | FORWARD WIDELY TO FARM LABORERS + MENTAL HEALTH CLINICIANS

I am assessing the benefits of farm work for individuals with a diagnosis of posttraumatic stress disorder (PTSD).

My survey is online, anonymous, and should not take longer than 10 minutes to complete.

I am looking for individuals who have worked on a farm for at least one growing season (6 months) within the past 2 years, have a diagnosis of posttraumatic stress disorder (PTSD) that preceded the farm experience, are at least 18 years old, and can read and write in English (simply to be able to complete the survey).

Individuals could range from occasional volunteers, paid workers, interns, workshares (who work in exchange for a share of product) and is meant to allow for a range of working experiences.

<https://www.surveymonkey.com/s/farmingandPTSD>

Please feel free to contact me with any questions at MWalls at Smith dot edu. This research project is for the completion of my MSW degree from Smith College School for Social Work.

Table 5
Farm Activities

Farm Activities Engaged In On the Farm, Specific	Frequency	Valid %
All operations to include milking goats, butchering chickens, feeding and daily chores (hogs, goats, laying hens, and ducks), fencing, harvesting vegetables for home and market.	1	2.6
Animal Management, Gardening, Farm Maintenance, Crop Harvesting, Greenhouse/Gardening, Farm Food Kitchen Food/M meal Preparation.	1	2.6
Building a trellis, weeding, watering, trimming, harvesting, fertilizing, spraying	1	2.6
Calving cows, driving tractors doing dirt work, harvesting crops, driving semis hauling grains to elevators, fence work, feeding all animals on farm grounds normal farm work	1	2.6
cultivating and harvesting, feeding livestock	1	2.6
Daily watering, digging, plowing picking and seding.	1	2.6
Direct Supervision of Farm activities as well as assisting with all aspects of production to include Planting, watering and harvesting.	1	2.6
Everything from field crop management and harvest to livestock management (moving, feeding, watering, etc.)	1	2.6
Feed and care of all animals. Maintenance of farm equipment. Tilling, planting, watering and harvesting veggies.	1	2.6
Feeding animals, building, vegetable weeding planting and selling at farmers market	1	2.6
Feeding breeding treating of livestock, planting, watering, controlling pest and disease.	1	2.6
Handling of livestock	1	2.6
Harvesting, Planning, Planting, Weeding...everything vegetable	1	2.6
Harvesting, planting, animal care taking, manual / physical labor	1	2.6
I am a beekeeper and tend to 36 hives	1	2.6
I am the owner of my farm, I have no employees so I do everything. feed and manage the meat goats. feed and manage poultry for eggs and meat. work the soil and plant/manage/harvest market vegetables. sell my products at local farm markets.	1	2.6
I own and operate a pastured poultry egg operation and wholesale my eggs. I also process chickens for people during the summer.	1	2.6
I'm still active in all of these: starting seeds, saving seeds, planting, harvesting, maintaining field production and health, composting, marketing, taking care of the poultry- feeding, watering, coop maintenance. Canning, preserving, etc.	1	2.6
Last year, harvesting, packing CSA shares. This year, prepping and planting.	1	2.6
Managed vegetable garden, used farm equipment, harvested vegetables	1	2.6
Plant, tend to, & harvest vegetables. Harvest fruits. Care & feeding of sheep, pigs, cattle, horses, ducks, chickens, guinea, & rabbits.	1	2.6
Planting pest controls harvest	1	2.6
Planting, irrigation, harvesting, of vegetables. Work with livestock feeding, watering, and moving to other paddocks.	1	2.6
Pruning trees, weeding and mulching, cleaning goat pens, repairing pens, feeding animals (chicken scratch and hay), clipping goat hooves	1	2.6
Pruning, harvesting, irrigating, rodent control, gardening, mowing	1	2.6
Purchasing, veterinary care of animals, feeding, accounting, all facets of owning a farm	1	2.6
Rasing rabbits, quail and goats.	1	2.6
Seed to harvest for seasonal vegetable, chicken egg production.	1	2.6
seeding, watering and harvesting vegetables, giving grain to livestock, basic maintenance.	1	2.6
Too much to write. Essentially, everything	1	2.6
Vegetable germination through harvest.	1	2.6
Vegetable planting, weeding harvesting, feed and water and care for chickens, tend orchard trees, began beekeeping 4 years ago which entails various work through out the year.	1	2.6
we grow a sustainable Garden and raise chickens to help supply food and reduce spending.	1	2.6
This allows me to work home. Vegetables,flowers and chickens are my therapy and the only thing that keeps me off medication.	1	2.6